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| EXAMINER |
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WANG, EUGENIA

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| ART UNIT | PAPER NUMBER |
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1795

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05/10/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/577,988 | Applicant(s) AOYAMA ET AL. | |
| | Examiner EUGENIA WANG | Art Unit 1795 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-18,20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) 13-18 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-12 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. In response to the amendment received March 11, 2010:
 - a. Claim 21 has been added as per Applicant's request. Claims 1, 2-19, and 20-21 are pending with claims 13-19 and 20 being withdrawn as being drawn to unelected inventions.
 - b. The previous objection to the Specification has been withdrawn in light of the amendment.
 - c. The previous objections to the claims have been withdrawn in light of the amendment. (It is noted with respect to claim 5, due to the nature of the strikeout through "4," wherein the strikeout corresponds with the cross bar of the "4" and wherein the "4" was separated from the rest of the strikeout portion, it is difficult to perceived such a strikeout. However, as the preliminary amendment did show a strikeout preceding the 4, thus Examiner accepts Applicant's submission that the "4" was indeed deleted in the May 3, 2006 Preliminary amendment.)
 - d. The previous 112 rejections have been withdrawn in light of the amendment.
 - e. The use of previously relied upon US 2004/0126628 (Balliet et al.) has been withdrawn in light of the amendment (specifically with respect to the newly added structural features corresponding to the mixer). However, a new rejection has been applied. Such a change in the rejection is necessitated by the amendment, thus the action is final.

Claim Objections

2. Claim 21 objected to because of the following informalities: missing a “the” before “purge decision unit” in line 2 for grammatical correctness. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 3-6, 8-9, and 21 are rejected under 35 U.S.C. 103(a) as obvious US 2002/0098393 (Dine et al.) in view of the Fuel Cell Handbook (FCH).

As to claim 1, Dine et al. teach of a fuel cell system [100] with a fuel cell [102], wherein power is provided to the external circuit [178] including primary load [146] (fig. 1). One type of fuel cell embodied is a fuel cell with a solid polymer electrolyte that is a proton exchange membrane (PEM) (i.e. proton conductive) (para 0008; para 0029). In the embodiment of a PEM fuel cell it is seen that hydrogen must at least partially permeate through the anode catalyst layer [A] (hydrogen permeable layer), which is next to the proton exchange membrane [P] (electrolyte) in order for the fuel cell to exchange ions and create usable power (fig. 2; para 0008). Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Also, limitations appearing in the specification but not recited in the claim are not read into the claim. See *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d, 1320, 1322 (Fed. Cir. 1989).

Where applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. 102 and 103, expressed as a 102/103 rejection.

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. In *re* Rijckaert, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).

“In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.” *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)

In the case of the instant application the basis for expectation of inherency is that hydrogen is directly contacted with the anode [A] in such a manner that hydrogen ions are transported through it (indicating contact and porosity) (fig. 2; para 0008). Thus, in some manner, since contact and porosity are shown, the anode [14] is at least somewhat permeable (for example on the surface to allow for the reaction to occur).

The Examiner invites applicant to provide that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product.

Whether the rejection is based on inherency’ under 35 U.S.C. 102, on prima facie obviousness’ under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same...[footnote omitted].” The burden of proof is similar to that required with respect to product-by-process claims. In *re* Fitzgerald, 619 F.2d 67, 70, 205 USPQ 594, 596

Art Unit: 1795

(CCPA 1980) (quoting *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)).

As seen in fig. 1, there is a hydrogen source [140] (fuel gas feeder) that feeds to anode side of the fuel cell (from inlet [130] to outlet [132] via anode flow field plate [118]). Furthermore, it is noted that air source [142] (air does not have hydrogen and thus is considered a purge gas feeder) is connected to burners [151a-c] (taken to be a composite mixer, as hydrogen and air can mix in such burners) via branch [164] (fig. 1). The air that passes through the burners [151a-c] is fed to the anode inlet [130] through the recycle loop of heat exchanger [152] (fig. 1; para 0031; para 0040-0041). It is noted that a shut down procedure is input into the system, as it is stated that when the fuel cell shuts down, the load is disconnected and external air (via valves [162a-c]) is flowed to the first burner (para 0040-0041), thus constituting a purge decision unit (as it recognizes a shut down decision and disconnects the load, which draws power and eventually feeds external air to the burner). Such actions (upon shut-down, controlling such that external air (purge gas) is fed to the fuel cell, eventually replacing the fuel gas) indicates the presence of a purge controller in conjunction with the purge decision unit, as such actions are controlled to happen only in shut-down procedure (i.e. a prerequisite for purging) (see para 0040-0041). Lastly it is specifically noted that the presence of a control system is further supported, as valves are stated to be controlled (for non-limiting example see para 0018 and para 0040). Thus some sort of controller is inherently and necessarily connected to the system of Dine et al. (as applied to the blowers, valves, switches, etc.).

Art Unit: 1795

It is noted that Dine et al. does not specifically state that the anode (hydrogen permeable layer) is metal.

However, the FCH states that for a PEM fuel cell (the same type as embodied in Dine et al.), the electrode are generally carbon supported platinum (p 3-4, 2nd paragraph). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make an anode catalyst of carbon supported platinum (a metal), since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. Additionally, the use of such a material would have at the very least been obvious, as the substitution of one known catalyst material (that taught by the FCH) for another would have yielded the predictable result of acting as a PEM fuel cell catalyst. Therefore it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made use a platinum containing catalyst, as the use of such a known material would have yielded predictable result of operating as a fuel cell catalyst.

As to claim 3, Dine et al. teach that the purge (using external air) is not started until shut-down procedure (mode) (para 0040-0041). (Thus, the purge decision unit, i.e. controller that controls the prescribed actions, is executed on a basis of the operational status (i.e. shut-down status) of the fuel cell.)

As to claim 4, Dine et al.'s procedure (as outline in para 0040-0041) upon shut-down disconnects the primary load [146], stops fresh fuel flow, and closes fuel valves [190a-c] prior to feeding air. This is interpreted to be a prescribed time period (as there

Art Unit: 1795

is a time period associated for doing such actions) prior to actuating the purge gas (air) feeder and after power generation (i.e. the starting of shut down), barring specification as to what constitutes the “prescribed time period.” Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Also, limitations appearing in the specification but not recited in the claim are not read into the claim. See *In re Zletz*, 893F.2d 319, 321-22, 13 USPQ2d, 1320, 1322 (Fed. Cir. 1989).

As to claim 5, Dine et al.’s structure includes valves [166, 172] and blower [150]. This constitutes the pressurizing unit, as blower [150] is used to determine whether or not gas is recycled and [172] closes the anode exhaust (and thus would cause pressure to rise when the valve is closed (especially if valve [166] were open, too)). Furthermore, the oxidant source [142] can be blocked from the anode using valves [182 and 162a-c]. Accordingly the structure of Dine et al. would be capable of raising the pressure of the fuel gas in the fuel gas flow passage formed in the fuel cell after the fuel cell has stopped but while the purge gas supply portion is not actuated). It is capable of providing such a control, as the structure (valves and blowers with controller) is capable of behaving in the claimed manner, and thus the structure of Dine et al. meets the structure claimed.

It has been held that the recitation of an element is “capable” of performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.

Art Unit: 1795

While intended use recitations and other types of functional language cannot be entirely disregarded. However, in apparatus, article, and composition claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. In re Casey, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); In re Otto, 312 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963).

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). See also MPEP § 2114.

The manner of operating the device does not differentiate an apparatus claim from the prior art. A claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

As to claim 6, Dine et al.’s structure includes valve [172] (part of the pressurizing unit), which closes/opens the anode exhaust would block the outlet of the fuel gas flow passage) as well as valve [166], which allows flow from the fuel source [140]. Accordingly the structure of Dine et al. would be capable of raising the pressure of the fuel gas feeder to supply fuel gas while blocking the outlet. It is capable of providing

Art Unit: 1795

such a control, as the structure (valves and blowers with controller) is capable of behaving in the claimed manner, and thus the structure of Dine et al. meets the structure claimed. Please see the rejection of claim 5 for the Office's position on functional limitation as applied to apparatus claims.

As to claim 8, it is noted that Dine et al. teach of having a primary load [70], an auxiliary load [148], and diode [147], wherein current flow through the auxiliary load only happens when the voltage is greater than about 0.2 volts per fuel cell (para 0036). Accordingly, Dine et al. indicate that a voltage reading is appreciated. Furthermore, as set as set forth in the rejection to claim 1 to be necessarily (i.e. inherently_ present, there is a controller controlling the valves, blowers, etc. Therefore, in such a manner, the system of Dine et al. is capable commencing power generation by the fuel cell after the purge gas feeder has been actuated by using the fuel gas feeder to supply the fuel cell with fuel gas at a level in excess of the level corresponding to the power to be generated by the fuel cell (barring specification as to specification as to what the "level in excess" corresponds to). Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Also, limitations appearing in the specification but not recited in the claim are not read into the claim. See *In re Zletz*, 893F.2d 319, 321-22, 13 USPQ2d, 1320, 1322 (Fed. Cir. 1989). It is capable of providing such a control, as the structure (valves and blowers with controller and the recognition of power generated and delivered) is capable of behaving in the claimed manner, and thus the structure of Dine et al. meets the structure claimed. Please see

Art Unit: 1795

the rejection of claim 5 for the Office's position on functional limitation as applied to apparatus claims. Such a position is incorporated herein (but not reiterated for brevity's sake.)

As to claim 9, as set forth above (in the rejection to claims 1 and 8). Dine et al.'s controller controls the valves/blowers/load connections, wherein voltage readings of the fuel cells are specifically appreciated. Furthermore, it is noted that Dine et al.'s control mechanism is capable of responding to sensed signals of oxygen and hydrogen amounts/ratios (para 0018). In such a manner the system of Dine et al. is capable of controlling the fuel gas feeder (fuel source [140] with its accompanying valve [166]) with respect to the power generated by the fuel cell, such that when the power to be generated by the fuel cell is equal to or less than a prescribed value, it supplies the fuel gas at a level in excess of the level corresponding to the power to be generated or when the power generated is greater than the prescribed value supplies the fuel gas at a level corresponding to the power to be generated, barring specification as to what the prescribed values are. Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Also, limitations appearing in the specification but not recited in the claim are not read into the claim. See *In re Zletz*, 893F.2d 319, 321-22, 13 USPQ2d, 1320, 1322 (Fed. Cir. 1989). It is capable of providing such a control, as the structure (valves and blowers with controller and the recognition of power generated and delivered) is capable of behaving in the claimed manner, and thus the structure of Dine et al. meets the structure claimed. Please see

Art Unit: 1795

the rejection of claim 5 for the Office's position on functional limitation as applied to apparatus claims. Such a position is incorporated herein (but not reiterated for brevity's sake.)

As to claim 21, Dine et al.'s control (via inherent controller/decision unit) is said to operate such that if purge condition is met that valve [172] (downstream of the anode) is partially opened (para 0040). This meets condition (1). It is noted that the claim language is written in the alternate, such that only condition (1) or (2) must be met. Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Also, limitations appearing in the specification but not recited in the claim are not read into the claim. See *In re Zletz*, 893F.2d 319, 321-22, 13 USPQ2d, 1320, 1322 (Fed. Cir. 1989). However, it is noted that even if both conditions were required to be met, as the presence of valve [172] would provide the structural limitation as claimed, wherein it would be capable of being closed when the purge condition is not met. Please see the rejection of claim 5 for the Office's position on functional limitation as applied to apparatus claims. Such a position is incorporated herein (but not reiterated for brevity's sake.)

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dine et al. in view of the FCH, as applied to claims 1 and 3, in further view of US 2004/0033395 (Thompson).

As to claim 7, Dine et al. does not teach of a temperature sensing unit for sensing temperature at a prescribed location that is part of the power supply system

Art Unit: 1795

and that operates at a temperature which rises to a prescribed high temperature during power generation by the fuel cell, wherein the purge decision unit decides that the purge condition is met as long as the temperature sensed by the temperature sensing unit does not go above a prescribed value.

However, Thompson teaches of having temperature sensor on the anode and cathode outlets [62, 66] to read the temperature of the fuel cell, wherein the sensors are connected to a controller and receive the temperature signals (fig. 2; para 0029). It is noted that control of the valves within the system are operated with respect to the temperature sensors and that temperatures read are compared to set reference temperatures (para 0041-0042). The motivation for including the temperature sensors of Thompson et al. would be recognize the condition of the fuel cell during start to prevent frozen start, to prevent overheating and damaging the MEA (para 0035) and in order ensure that the fuel cell is operating at a normal operating temperature (para 0042). Therefore it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made use temperature sensors in conjunction with a controller in order to prevent frozen start, to prevent overheating and damaging the MEA, and in order to ensure that the fuel cell is operating at a normal temperature. Accordingly, in such a manner, the combination of Dine et al. with Thompson would be capable of function in the prescribed manner (sensing temperature at a prescribed location that is part of the power supply system and that operates at a temperature which rises to a prescribed high temperature (any preset temperature, barring specification as to what "high" refers to) during power generation by the fuel cell,

Art Unit: 1795

wherein the purge decision unit decides that the purge condition is met as long as the temperature sensed by the temperature sensing unit does not go above a prescribed value). It is capable of providing such a control, as the obviated structure (controller connected in obviated manner) is capable of behaving in the claimed manner. Please see the rejection of claim 5 for the Office's position on functional limitation as applied to apparatus claims. Such a position is incorporated herein (but not reiterated for brevity's sake.)

5. Claim 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dine et al., as applied to claims 1 and 3, in further view of US 6,063,515 (Epp et al.).

As to claim 10, Dine et al. do not provide a secondary cell to the fuel cell system.

Epp et al. teach the use of a secondary battery [306] (cell) for supplementing the power generated by the fuel cell (col. 11, lines 8-12). The motivation for providing a secondary battery to the teaching of Dine et al. is to ensure that the load will still work even if the fuel cell does not provide enough electricity to it. Therefore it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made combine a secondary battery with a fuel cell in order to guarantee that the load has enough power to run on.

As to claim 11, the combination of does not specifically teach of a state of charge sensing unit for sensing the state of charge of the secondary cell (battery), wherein in the event that the state of charge is equal or less than a prescribed value, charging of the secondary cell is carried out using the fuel cell with priority over the operation of shutting off power generation by the fuel cell.

Art Unit: 1795

However, there is motivation for providing the state-of-charge measurement module. The motivation for providing such a module on the secondary battery is to ensure that the load has enough power to sustain the load. Therefore it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to include the state-of-charge measurement module on the battery in order to provide the user of the load with a warning about battery replacement in order to ensure that the load will function. Furthermore, it is noted that since Epp et al.'s system says that the power of the battery is only used when the fuel cell generated power is not enough (col. 11, lines 8-12), a sort of determination control is inherently applied to the load, fuel cell, and battery to determine if the battery power is needed. Accordingly, in such a manner, the combination of Dine et al. with Epp et al. would be capable of being programmed for the function as prescribed (wherein in the event that the state of charge is equal or less than a prescribed value, charging of the secondary cell is carried out using the fuel cell with priority over the operation of shutting off power generation by the fuel cell). It is capable of providing such a control, as the obviated structure (controller connected in obviated manner) is capable of behaving in the claimed manner. Please see the rejection of claim 5 for the Office's position on functional limitation as applied to apparatus claims. Such a position is incorporated herein (but not reiterated for brevity's sake.)

As to claim 12, Dine et al. do not provide a secondary cell to the fuel cell system and does not have an output request acquiring unit for acquiring an output request when the output request acquired is equal to or less than a prescribed value, the purge

Art Unit: 1795

decision unit decides that the purge condition is not met and outputs power from the secondary cell.

Epp et al. teach the use of a secondary battery [306] for supplementing the power generated by the fuel cell (col. 11, lines 8-12). As Epp et al.'s system says that the power of the battery is only used when the fuel cell generated power is not enough, a sort of determination control is inherently applied to the load, fuel cell, and battery to determine if the battery power is needed. The motivation for providing a secondary battery to the teaching of Aoyama et al. is to ensure that the load will still work even if the fuel cell does not provide enough electricity to it. Therefore it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made combine a secondary battery with a fuel cell in order to guarantee that the load has enough power to run on. Furthermore, the combination of Dine et al. with Epp et al. would have the output request acquiring unit, as the battery in Epp et al.'s system inherently has an output request acquiring unit that receives an output request to the power system, wherein in response to the output request of not greater than a preset level, the power control module controls the secondary battery to output electric power. The support for this is stated within Epp et al.'s use for the battery – the fact that it is only employed when the demand (request) of electrical load [360] exceeds the output of the fuel cell stack [305] (col. 11, lines 8-12). As it talks about the demand (request) of load [360] and output of fuel cell stack [305], it inherently has an output request and module. In such a manner, the obviated structure (with controller connected in the obviated manner) is capable of behaving in the claimed manner. Please see the

Art Unit: 1795

rejection of claim 5 for the Office's position on functional limitation as applied to apparatus claims. Such a position is incorporated herein (but not reiterated for brevity's sake.)

Response to Arguments

6. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

As previously mentioned, Balliet et al., previously relied upon, is no longer relied upon in this rejection. The reason for the removal of Balliet et al. is in light of the amendment reciting the structure of a mixer, wherein a purge gas feeder is connected to the mixer and feeds purge gas devoid of hydrogen to the anode side of the fuel cell via the mixer. Accordingly, any arguments directed towards Balliet are moot. However, it is noted that a new rejection wherein Dine et al. has been relied upon as the primary reference is applied, wherein Examiner submits that Dine et al. as used in combination, above does render obvious the claim limitations of the claimed power supply system.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

Art Unit: 1795

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EUGENIA WANG whose telephone number is (571)272-4942. The examiner can normally be reached on 7 - 4:30 Mon. - Thurs., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/E. W./
Examiner, Art Unit 1795

/Gregg Cantelmo/
Primary Examiner, Art Unit 1795